

SEQUENCE LISTING

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<120> Polynucleotides Encoding Members of the Human B
Lymphocyte Activation Antigen B-7 Family and
Polypeptides Encoded Thereby

<130> 15966-562 NATL

<140> 10/069,626

<141> 2000-08-31

<150> PCT/US00/24220

<151> 2000-08-31

<150> 60/152383

<151> 1999-09-03

<150> 60/172909

<151> 1999-12-21

<150> 60/183578

<151> 2000-02-18

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<170> PatentIn Ver. 2.0

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Met Ala

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Asn Glu Gln Gly Leu Phe Asp Val His Ser Ile Leu Arg Val Val Leu

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Gly Ala Asn Gly Thr Tyr Ser Cys Leu Val Arg Asn Pro Val Leu Gln

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Gln Asp Ala His Ser Ser Val Thr Ile Thr Pro Gln Arg Ser Pro Thr

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Gly Ala Val Glu Val Gln Val Pro Glu Asp Pro Val Val Ala Leu Val				
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ggc acc gat gcc acc ctg cac tgc tcc ttc tcc ccc gag cct ggc ttc				356
Gly Thr Asp Ala Thr Leu His Cys Ser Phe Ser Pro Glu Pro Gly Phe				
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Ser Leu Thr Gln Leu Asn Leu Ile Trp Gln Leu Thr Asp Thr Lys Gln				
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Leu Arg Pro Gly Asp Thr Val Thr Ile Thr Cys Ser Ser Tyr Arg Gly			
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Tyr Pro Glu Ala Glu Val Phe Trp Gln Asp Gly Gln Gly Val Pro Leu			
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Thr Gly Asn Val Thr Thr Ser Gln Met Ala Asn Glu Gln Gly Leu Phe			
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Asp Val His Ser Val Leu Arg Val Val Leu Gly Ala Asn Gly Thr Tyr			
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Pro Thr Gly Ala Val Glu Val Gln Val Pro Glu Asp Pro Val Val Ala

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Leu Val Gly Thr Asp Ala Thr Leu His Cys Ser Phe Ser Pro Glu Pro

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Gly Phe Ser Leu Thr Gln Leu Asn Leu Ile Trp Gln Leu Thr Asp Thr

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Lys Gln Leu Val His Ser Phe Thr Glu Gly Arg Asp Gln Gly Ser Ala

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Tyr Ala Asn Arg Thr Ala Leu Phe Pro Asp Leu Leu Ala Gln Gly Asn

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Ala Ser Leu Arg Leu Gln Arg Val Arg Val Ala Asp Glu Gly Ser Phe

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Ala Arg Ala Cys Ser Gly Arg Gly Gln Leu His Leu Leu Arg Glu His

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Pro Gly Phe Arg Gln Arg Cys Arg Gln Pro Ala Gly Gly Arg Ser Leu

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gga cac ggt gtg acc atc acg tgc tcc agc tac cag ggc tac cct gag			241
Gly His Gly Val Thr Ile Thr Cys Ser Ser Tyr Gln Gly Tyr Pro Glu			
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gct gag gtg ttc tgg cag gat ggg cag ggt gtg ccc ctg act ggc aac			289
Ala Glu Val Phe Trp Gln Asp Gly Gln Gly Val Pro Leu Thr Gly Asn			
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gtg acc acg tcg cag atg gcc aac gag cag ggc ttg ttt gat gtg cac			337
Val Thr Thr Ser Gln Met Ala Asn Glu Gln Gly Leu Phe Asp Val His			
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Thr Pro Gln Arg Ser Pro Thr Gly Ala Val Glu Val Gln Val Pro Glu			

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Leu Gly Ala Asn Gly Thr Tyr Ser Cys Leu Val Arg Asn Pro Val Leu			
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Leu Ala Gln Gly Asn Ala Ser Leu Arg Leu Gln Arg Val Arg Val Ala

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Asp Glu Gly Ser Phe Thr Cys Phe Val Ser Ile Arg Asp Phe Gly Ser

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Ala Ala Val Ser Leu Gln Val Ala Ala Pro Tyr Ser Lys Pro Ser Met

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Thr Leu Glu Pro Asn Lys Asp Leu Arg Pro Gly Asp Thr Val Thr Ile

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Thr Cys Ser Ser Tyr Arg Gly Tyr Pro Glu Ala Glu Val Phe Trp Gln

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Asp Gly Gln Gly Val Pro Leu Thr Gly Asn Val Thr Thr Ser Gln Met

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Ala Asn Glu Gln Gly Leu Phe Asp Val His Ser Val Leu Arg Val Val

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Leu Gly Ala Asn Gly Thr Tyr Ser Cys Leu Val Arg Asn Pro Val Leu

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Gln Gln Asp Ala His Gly Ser Val Thr Ile Thr Gly Gln Pro Met Thr

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Phe Pro Pro Glu Ala Leu Trp Val Thr Val Gly Leu Ser Val Cys Leu

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Met Leu Arg Arg Arg Gly Ser Pro Gly Met Gly Val His Val Gly Ala

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Ala Leu Gly Ala Leu Trp Phe Cys Leu Thr Gly Ala Leu Glu Val Gln

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gtc cct gaa gac cca gtg gtg gca ctg gtg ggc acc gat gcc acc ctg 203

Val Pro Glu Asp Pro Val Val Ala Leu Val Gly Thr Asp Ala Thr Leu

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Cys Cys Ser Phe Ser Pro Glu Pro Gly Phe Ser Leu Ala Gln Leu Asn

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Glu Gly Gln Asp Gln Gly Ser Ala Tyr Ala Asn Arg Thr Ala Leu Phe

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Ser Gln Met Ala Asn Glu Gln Gly Leu Phe Asp Val His Ser Ile Leu			

195	200	205	
cgg gtg gtg ctg ggt gca aat ggc acc tac agc tgc ctg gtg cgc aac 731			
Arg Val Val Leu Gly Ala Asn Gly Thr Tyr Ser Cys Leu Val Arg Asn			
210	215	220	
ccc gtg ctg cag cag gat gcg cac agc tct gtc acc atc aca ccc cag 779			
Pro Val Leu Gln Gln Asp Ala His Ser Ser Val Thr Ile Thr Pro Gln			
225	230	235	240
aga agc ccc aca gga gcc gtg gag gtc cag gtc cct gag gac ccg gtg 827			
Arg Ser Pro Thr Gly Ala Val Glu Val Gln Val Pro Glu Asp Pro Val			
	245	250	255
gtg gcc cta gtg ggc acc gat gcc acc ctg cgc tgc tcc ttc tcc ccc 875			
Val Ala Leu Val Gly Thr Asp Ala Thr Leu Arg Cys Ser Phe Ser Pro			
260	265	270	
gag cct ggc ttc agc ctg gca cag ctc aac ctc atc tgg cag ctg aca 923			
Glu Pro Gly Phe Ser Leu Ala Gln Leu Asn Leu Ile Trp Gln Leu Thr			
275	280	285	
gac acc aaa cag ctg gtg cac agt ttc acc gaa ggc cgg gac cag ggc 971			
Asp Thr Lys Gln Leu Val His Ser Phe Thr Glu Gly Arg Asp Gln Gly			
290	295	300	
agc gcc tat gcc aac cgc acg gcc ctc ttc ccg gac ctg ctg gca caa 1019			
Ser Ala Tyr Ala Asn Arg Thr Ala Leu Phe Pro Asp Leu Leu Ala Gln			

305	310	315	320	
ggc aat gca tcc ctg agg ctg cag cgc gtg cgt gtg gcg gac gag ggc				1067
Gly Asn Ala Ser Leu Arg Leu Gln Arg Val Arg Val Ala Asp Glu Gly				
	325	330	335	
agc ttc acc tgc ttc gtg agc atc cgg gat ttc ggc agc gct gcc gtc				1115
Ser Phe Thr Cys Phe Val Ser Ile Arg Asp Phe Gly Ser Ala Ala Val				
	340	345	350	
agc ctg cag gtg gcc gct ccc tac tcg aag ccc agc atg acc ctg gag				1163
Ser Leu Gln Val Ala Ala Pro Tyr Ser Lys Pro Ser Met Thr Leu Glu				
	355	360	365	
ccc aac aag gac ctg cgg cca ggg gac acg gtg acc atc acg tgc tcc				1211
Pro Asn Lys Asp Leu Arg Pro Gly Asp Thr Val Thr Ile Thr Cys Ser				
	370	375	380	
agc tac cgg ggc tac cct gag gct gag gtg ttc tgg cag gat ggg cag				1259
Ser Tyr Arg Gly Tyr Pro Glu Ala Glu Val Phe Trp Gln Asp Gly Gln				
385	390	395	400	
ggt gtg ccc ctg act ggc aac gtg acc acg tcg cag atg gcc aac gag				1307
Gly Val Pro Leu Thr Gly Asn Val Thr Thr Ser Gln Met Ala Asn Glu				
	405	410	415	
cag ggc ttg ttt gat gtg cac agc gtc ctg cgg gtg gtg ctg ggt gcg				1355
Gln Gly Leu Phe Asp Val His Ser Val Leu Arg Val Val Leu Gly Ala				

420 425 430
 aat ggc acc tac agc tgc ctg gtg cgc aac ccc gtg ctg cag cag gat 1403
 Asn Gly Thr Tyr Ser Cys Leu Val Arg Asn Pro Val Leu Gln Gln Asp
 435 440 445
 gcg cac ggc tct gtc acc atc aca ggg cag cct atg aca ttc ccc cca 1451
 Ala His Gly Ser Val Thr Ile Thr Gly Gln Pro Met Thr Phe Pro Pro
 450 455 460
 gag gcc ctg tgg gtg acc gtg ggg ctg tct gtc tgt ctc att gca ctg 1499
 Glu Ala Leu Trp Val Thr Val Gly Leu Ser Val Cys Leu Ile Ala Leu
 465 470 475 480
 ctg gtg gcc ctg gct ttc gtg tgc tgg aga aag atc aaa cag agc tgt 1547
 Leu Val Ala Leu Ala Phe Val Cys Trp Arg Lys Ile Lys Gln Ser Cys
 485 490 495
 gag gag gag aat gca gga gct gag gac cag gat ggg gag gga gaa ggc 1595
 Glu Glu Glu Asn Ala Gly Ala Glu Asp Gln Asp Gly Glu Gly Glu Gly
 500 505 510
 tcc aag aca gcc ctg cag cct ctg aaa cac tct gac agc aaa gaa gat 1643
 Ser Lys Thr Ala Leu Gln Pro Leu Lys His Ser Asp Ser Lys Glu Asp
 515 520 525
 gat gga caa gaa ata gcc tgaccatgag gaccagggag ctgctacccc 1691
 Asp Gly Gln Glu Ile Ala

530

tccctacagc tectaccctc tggctgcaat ggggctgcac tgtgagccct gcccccaaca 1751

gatgcatcct gctctgacag gtgggctcct tctccaaagg atgcgataca cagaccactg 1811

tgcagcctta tttctccaat ggacatgatt cccaagtcac cctgctgcct tttttcttat 1871

agacacaatg aacagaccac ccacaacctt agttctctaa gtcacccctgc ctgctgcctt 1931

atctcacagt acatacattt cttagggaca cagtacactg accacatcac caccctcttc 1991

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<210> 6

<211> 534

<212> PRT

<213> Homo sapiens

<400> 6

Met Leu Arg Arg Arg Gly Ser Pro Gly Met Gly Val His Val Gly Ala

1	5	10	15
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20	25	30	
Val Pro Glu Asp Pro Val Val Ala Leu Val Gly Thr Asp Ala Thr Leu			
35	40	45	
Cys Cys Ser Phe Ser Pro Glu Pro Gly Phe Ser Leu Ala Gln Leu Asn			
50	55	60	
Leu Ile Trp Gln Leu Thr Asp Thr Lys Gln Leu Val His Ser Phe Ala			
65	70	75	80
Glu Gly Gln Asp Gln Gly Ser Ala Tyr Ala Asn Arg Thr Ala Leu Phe			
85	90	95	
Pro Asp Leu Leu Ala Gln Gly Asn Ala Ser Leu Arg Leu Gln Arg Val			
100	105	110	
Arg Val Ala Asp Glu Gly Ser Phe Thr Cys Phe Val Ser Ile Arg Asp			
115	120	125	
Phe Gly Ser Ala Ala Val Ser Leu Gln Val Ala Ala Pro Tyr Ser Lys			
130	135	140	
Pro Ser Met Thr Leu Glu Pro Asn Lys Asp Leu Arg Pro Gly Asp Thr			
145	150	155	160

Val Thr Ile Thr Cys Ser Ser Tyr Gln Gly Tyr Pro Glu Ala Glu Val

165

170

175

Phe Trp Gln Asp Gly Gln Gly Val Pro Leu Thr Gly Asn Val Thr Thr

180

185

190

Ser Gln Met Ala Asn Glu Gln Gly Leu Phe Asp Val His Ser Ile Leu

195

200

205

Arg Val Val Leu Gly Ala Asn Gly Thr Tyr Ser Cys Leu Val Arg Asn

210

215

220

Pro Val Leu Gln Gln Asp Ala His Ser Ser Val Thr Ile Thr Pro Gln

225

230

235

240

Arg Ser Pro Thr Gly Ala Val Glu Val Gln Val Pro Glu Asp Pro Val

245

250

255

Val Ala Leu Val Gly Thr Asp Ala Thr Leu Arg Cys Ser Phe Ser Pro

260

265

270

Glu Pro Gly Phe Ser Leu Ala Gln Leu Asn Leu Ile Trp Gln Leu Thr

275

280

285

Asp Thr Lys Gln Leu Val His Ser Phe Thr Glu Gly Arg Asp Gln Gly

290

295

300

Ser Ala Tyr Ala Asn Arg Thr Ala Leu Phe Pro Asp Leu Leu Ala Gln
 305 310 315 320

Gly Asn Ala Ser Leu Arg Leu Gln Arg Val Arg Val Ala Asp Glu Gly
 325 330 335

Ser Phe Thr Cys Phe Val Ser Ile Arg Asp Phe Gly Ser Ala Ala Val
 340 345 350

Ser Leu Gln Val Ala Ala Pro Tyr Ser Lys Pro Ser Met Thr Leu Glu
 355 360 365

Pro Asn Lys Asp Leu Arg Pro Gly Asp Thr Val Thr Ile Thr Cys Ser
 370 375 380

Ser Tyr Arg Gly Tyr Pro Glu Ala Glu Val Phe Trp Gln Asp Gly Gln
 385 390 395 400

Gly Val Pro Leu Thr Gly Asn Val Thr Thr Ser Gln Met Ala Asn Glu
 405 410 415

Gln Gly Leu Phe Asp Val His Ser Val Leu Arg Val Val Leu Gly Ala
 420 425 430

Asn Gly Thr Tyr Ser Cys Leu Val Arg Asn Pro Val Leu Gln Gln Asp
 435 440 445

Ala His Gly Ser Val Thr Ile Thr Gly Gln Pro Met Thr Phe Pro Pro

450 455 460
 Glu Ala Leu Trp Val Thr Val Gly Leu Ser Val Cys Leu Ile Ala Leu
 465 470 475 480
 Leu Val Ala Leu Ala Phe Val Cys Trp Arg Lys Ile Lys Gln Ser Cys
 485 490 495
 Glu Glu Glu Asn Ala Gly Ala Glu Asp Gln Asp Gly Glu Gly Glu Gly
 500 505 510
 Ser Lys Thr Ala Leu Gln Pro Leu Lys His Ser Asp Ser Lys Glu Asp
 515 520 525
 Asp Gly Gln Glu Ile Ala
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<210> 7

<211> 1020

<212> DNA

<213> Homo sapiens

<400> 7

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gtcaccatca caccccagag aagccccaca ggagccgtgg aggtccaggt ccctgaggac 180

ccggtggtgg ccctagtggg caccgatgcc accctgact gtccttctc ccccgagcct 240

ggcttcagcc tgacacagct caacctcatc tggcagctga cagacaccaa acagctggtg 300

cacagtttca ccgaaggccg ggaccagggc agcgcctatg ccaaccgcac ggccctcttc 360

ccggacctgc tggcacaagg caatgcatcc ctgaggctgc agcgcgtgcg tgtggcggac 420

gagggcagct tcacctgctt cgtgagcatc cgggatttcg gcagcgtgc cgtcagcctg 480

caggtggccg ctccctactc gaagcccagc atgaccctgg agcccaacaa ggacctgcgg 540

ccaggggaca cggtgaccat cacgtgctcc agctaccggg gctaccctga ggctgaggtg 600

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acctacagct gcctggtgcg caaccccgtg ctgcagcagg atgcgcacgg ctctgtcacc 780

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agctgtgagg aggagaatgc aggagccgag gaccaggatg gggagggaga aggtccaag 960

acagccctgc agcctctgaa acactctgac agcaaagaag atgatggaca agaaatagcc 1020

<210> 8

<211> 1561

<212> DNA

<213> Homo sapiens

<400> 8

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tctccaaagg atgcgataca cagaccactg tgcagcctta tttctccaat ggacatgatt 180

cccaagtcac cctgctgcct tttttcttat agacacaatg aacagaccac ccacaacctt 240

agttctctaa gtcacctgc ctgctgcctt atttcacagt acatacattt cttagggaca 300

cagtacactg accacatcac caccctcttc ttccagtgc gcgtggacca tctggctgcc 360

ttttttctcc aaaagatgca atattcagac tgactgaccc cctgccttat ttcaccaaag 420

acacgatgca tagtcacccc ggccttgttt ctccaatggc cgtgatacac tagtgatcat 480

gttcagccct gcttccacct gcatagaatc ttttcttctc agacagggac agtgcggcct 540

caacatctcc tggagtctag aagctgtttc ctttccctc cttcctctc ttgctctagc 600

cttaataactg gccttttccc tccctgcccc aagtgaagac agggcactct gcgcccacca 660

catgcacagc tgtgcatgga gacctgcagg tgcacgtgct ggaacacgtg tggttccccc 720

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a 1561

<210> 9

<211> 1323

<212> DNA

<213> Homo sapiens

<400> 9

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cagatggcca acgagcaggg cttgtttgat gtgcacagca tctgcgggt ggtgctgggt 360

gcaaattggca cctacagctg cctggtgcgc aaccccgctg tgcagcagga tgcgcacagc 420

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gacccggtgg tggccctagt gggcaccgat gccaccctgc actgctcctt ctcccccgag 540

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accatcacag ggcagcctat gacattcccc ccagaggccc tgtgggtgac cgtggggctc 1140

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cagagctgtg aggaggagaa tgcaggagcc gaggaccagg atggggaggg agaaggctcc 1260

aagacagccc tgcagcctct gaaacactct gacagcaaag aagatgatgg acaagaaata 1320

gcc 1323

<210> 10

<211> 1561

<212> DNA

<213> Homo sapiens

<400> 10

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tctccaaagg atgcgataca cagaccactg tgcagcctta tttctccaat ggacatgatt 180

cccaagtcac cctgctgcct tttttcttat agacacaatg aacagaccac ccacaacctt 240

agttctctaa gtcacacctg ctgctgcctt atttcacagt acatacatTT cttagggaca 300

cagtacactg accacatcac caccctcttc ttccagtgtc gcgtggacca tctggctgcc 360

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acacgatgca tagtcacccc ggccttgttt ctccaatggc cgtgatacac tagtgatcat 480

gttcagccct gcttccacct gcatagaatc ttttcttctc agacagggac agtgcggcct 540

caacatctcc tggagtctag aagctgtttc ctttcccctc cttcctcctc ttgctctagc 600

cttaatactg gccttttccc tccctgcccc aagtgaagac agggcactct gcgcccacca 660

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actcggaggg attttgtaaa ctgggggtat attttgggga aaataaatgt ctttgtaaaa 1560

a 1561

<210> 11

<211> 1602

<212> DNA

<213> Homo sapiens

<400> 11

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ctgtggttct gcctcacagg agccctggag gtccaggctc ctgaagacct agtggtggca 120

ctggtgggca ccgatgccac cctgtgctgc tctttctccc ctgagcctgg cttcagcctg 180

gcacagctca acctcatctg gcagctgaca gataccaaac agctggtgca cagctttgct 240

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gcacagggca acgcatccct gaggctgcag cgcgtgctg tggcggacga gggcagcttc 360

acctgcttcg tgagcatccg ggatttcggc agcgctgccg tcagcctgca ggtggccgct 420

ccctactcga agcccagcat gaccctggag cccaacaagg acctgcggcc aggggacacg 480

gtgaccatca cgtgctccag ctaccagggc taccctgagg ctgaggtgtt ctggcaggat 540

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cgggaccagg gcagcgccta tgccaaccgc acggccctct tcccgacct gctggcacia 960

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atcacgtgct ccagctaccg gggctaccct gaggctgagg tgttctggca ggatgggcag 1200

gggtgtgcccc tgactggcaa cgtgaccacg tcgcagatgg ccaacgagca gggcttgttt 1260

gatgtgcaca gcgtcctgcg ggtgggtgctg ggtgcgaatg gcacctacag ctgcctgggtg 1320

cgcaaccccc tgctgcagca ggatgcgcac ggctctgtca ccatcacagg gcagcctatg 1380

acattcccc cagaggccct gtgggtgacc gtggggctgt ctgtctgtct cattgcactg 1440

ctgggtggccc tggctttcgt gtgctggaga aagatcaaac agagctgtga ggaggagaat 1500

gcaggagctg aggaccagga tggggaggga gaaggctcca agacagccct gcagcctctg 1560

aaacactctg acagcaaaga agatgatgga caagaaatag cc 1602

<210> 12

<211> 568

<212> DNA

<213> Homo sapiens

<400> 12

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tctccaaagg atgcgataca cagaccactg tgcagcctta tttctccaat ggacatgatt 180

cccaagtcac cctgctgcct tttttcttat agacacaatg aacagaccac ccacaacctt 240

agttctctaa gtcacccctgc ctgctgcctt atttcacagt acatacatTT cttaggga 300

cagtacactg accacatcac caccctcttc ttccagtgcT gcgtggacca tctggctgcc 360

ttttttctcc aaaagatgca atattcagac tgactgaccc cctgccttat ttcaccaaag 420

acacgatgca tagtcacccc gaccttggtt ctccaatggc cgtgatacac tagtgatcat 480

gttcagccct gcttcacacT gcatagaatc ttttcttctc agacagggac agtgcgccct 540

caacatctcc tggagtctag gcggccgc 568

<210> 13

<211> 288

<212> PRT

<213> Homo sapiens

<400> 13

Met Gly His Thr Arg Arg Gln Gly Thr Ser Pro Ser Lys Cys Pro Tyr

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Leu Asn Phe Phe Gln Leu Leu Val Leu Ala Gly Leu Ser His Phe Cys

20 25 30

Ser Gly Val Ile His Val Thr Lys Glu Val Lys Glu Val Ala Thr Leu

35 40 45

Ser Cys Gly His Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile

50

55

60

Tyr Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Asp

65

70

75

80

Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr

85

90

95

Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly

100

105

110

Thr Tyr Glu Cys Val Val Leu Lys Tyr Glu Lys Asp Ala Phe Lys Arg

115

120

125

Glu His Leu Ala Glu Val Thr Leu Ser Val Lys Ala Asp Phe Pro Thr

130

135

140

Pro Ser Ile Ser Asp Phe Glu Ile Pro Thr Ser Asn Ile Arg Arg Ile

145

150

155

160

Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro His Leu Ser Trp Leu

165

170

175

Glu Asn Gly Glu Glu Leu Asn Ala Ile Asn Thr Thr Val Ser Gln Asp

180

185

190

Pro Glu Thr Glu Leu Tyr Ala Val Ser Ser Lys Leu Asp Phe Asn Met

195

200

205

Thr Thr Asn His Ser Phe Met Cys Leu Ile Lys Tyr Gly His Leu Arg

210

215

220

Val Asn Gln Thr Phe Asn Trp Asn Thr Thr Lys Gln Glu His Phe Pro

225

230

235

240

Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Val Asn Gly

245

250

255

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265

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Glu Arg Arg Arg Asn Glu Arg Leu Arg Arg Glu Ser Val Arg Pro Val

275

280

285

<210> 14

<211> 288

<212> PRT

<213> Macaca mulatta

<400> 14

Met Gly His Thr Arg Arg Gln Glu Ile Ser Pro Ser Lys Cys Pro Tyr

1 5 10 15

Leu Lys Phe Phe Gln Leu Leu Val Leu Ala Cys Leu Ser His Phe Cys

20 25 30

Ser Gly Val Ile His Val Thr Lys Glu Val Lys Glu Val Ala Thr Leu

35 40 45

Ser Cys Gly His Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile

50 55 60

Tyr Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Asp

65 70 75 80

Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr

85 90 95

Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly

100 105 110

Thr Tyr Glu Cys Val Val Leu Lys Tyr Glu Lys Asp Ala Phe Lys Arg

115 120 125

Glu His Leu Ala Glu Val Met Leu Ser Val Lys Ala Asp Phe Pro Thr

130 135 140

Pro Ser Ile Thr Asp Ser Glu Ile Pro Pro Ser Asn Ile Arg Arg Ile

145 150 155 160

Ile Cys Ser Asn Ser Gly Gly Phe Pro Glu Pro His Leu Ser Trp Leu

165 170 175

Glu Asn Gly Glu Glu Leu Asn Ala Ile Ser Thr Thr Val Ser Gln Asp

180 185 190

Pro Glu Thr Glu Leu Tyr Thr Val Ser Ser Lys Leu Asp Phe Asn Met

195 200 205

Thr Thr Asn His Ser Phe Met Cys Leu Ile Lys Tyr Gly His Leu Arg

210 215 220

Val Asn Gln Thr Phe Asn Trp Asn Thr Pro Lys Gln Glu His Phe Pro

225 230 235 240

Asp Asn Leu Leu Pro Ser Trp Ala Ile Ile Leu Ile Ser Val Asn Gly

245 250 255

Ile Phe Val Ile Cys Cys Leu Thr Tyr Cys Phe Ala Pro Arg Cys Arg

260 265 270

Glu Arg Arg Arg Asn Glu Thr Leu Arg Arg Glu Ser Val Arg Pro Val

275 280 285

<210> 15

<211> 299

<212> PRT

<213> Oryctolagus sp.

<400> 15

Met Gly His Thr Leu Arg Pro Gly Thr Pro Leu Pro Arg Cys Leu His

1

5

10

15

Leu Lys Leu Cys Leu Leu Leu Ala Leu Ala Gly Leu His Phe Ser Ser

20

25

30

Gly Ile Ser Gln Val Thr Lys Ser Val Lys Glu Met Ala Ala Leu Ser

35

40

45

Cys Asp Tyr Asn Ile Ser Ile Asp Glu Leu Ala Arg Met Arg Ile Tyr

50

55

60

Trp Gln Lys Asp Gln Gln Met Val Leu Ser Ile Ile Ser Gly Gln Val

65

70

75

80

Glu Val Trp Pro Glu Tyr Lys Asn Arg Thr Phe Pro Asp Ile Ile Asn

85

90

95

Asn Leu Ser Leu Met Ile Leu Ala Leu Arg Leu Ser Asp Lys Gly Thr

100

105

110

Tyr Thr Cys Val Val Gln Lys Asn Glu Asn Gly Ser Phe Arg Arg Glu

115

120

125

His Leu Thr Ser Val Thr Leu Ser Ile Arg Ala Asp Phe Pro Val Pro

130

135

140

Ser Ile Thr Asp Ile Gly His Pro Asp Pro Asn Val Lys Arg Ile Arg

145

150

155

160

Cys Ser Ala Ser Gly Gly Phe Pro Glu Pro Arg Leu Ala Trp Met Glu

165

170

175

Asp Gly Glu Glu Leu Asn Ala Val Asn Thr Thr Val Asp Gln Asp Leu

180

185

190

Asp Thr Glu Leu Tyr Ser Val Ser Ser Glu Leu Asp Phe Asn Val Thr

195

200

205

Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly Glu Leu Ser Val

210

215

220

Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu Pro Pro Ile Asp

225

230

235

240

Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly Ala Leu Val Leu

245

250

255

Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His Val Ala Arg Trp

260

265

270

Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr Glu Arg Leu Ser

275

280

285

Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly

290

295

<210> 16

<211> 292

<212> PRT

<213> Felis catus

<400> 16

Met Gly His Ala Ala Lys Trp Lys Thr Pro Leu Leu Lys His Pro Tyr

1

5

10

15

Pro Lys Leu Phe Pro Leu Leu Met Leu Ala Ser Leu Phe Tyr Phe Cys

20

25

30

Ser Gly Ile Ile Gln Val Asn Lys Thr Val Glu Glu Val Ala Val Leu

35

40

45

Ser Cys Asp Tyr Asn Ile Ser Thr Lys Glu Leu Thr Glu Ile Arg Ile

50

55

60

Tyr Trp Gln Lys Asp Asp Glu Met Val Leu Ala Val Met Ser Gly Lys

65 70 75 80

Val Gln Val Trp Pro Lys Tyr Lys Asn Arg Thr Phe Thr Asp Val Thr

85 90 95

Asp Asn His Ser Ile Val Ile Met Ala Leu Arg Leu Ser Asp Asn Gly

100 105 110

Lys Tyr Thr Cys Ile Ile Gln Lys Ile Glu Lys Gly Ser Tyr Lys Val

115 120 125

Lys His Leu Thr Ser Val Met Leu Leu Val Arg Ala Asp Phe Pro Val

130 135 140

Pro Ser Ile Thr Asp Leu Gly Asn Pro Ser His Asn Ile Lys Arg Ile

145 150 155 160

Met Cys Leu Thr Ser Gly Gly Phe Pro Lys Pro His Leu Ser Trp Leu

165 170 175

Glu Asn Glu Glu Glu Leu Asn Ala Ile Asn Thr Thr Val Ser Gln Asp

180 185 190

Pro Glu Thr Glu Leu Tyr Thr Ile Ser Ser Glu Leu Asp Phe Asn Met

195 200 205

Thr Asn Asn His Ser Phe Leu Cys Leu Val Lys Tyr Gly Asn Leu Leu

210

215

220

Val Ser Gln Ile Phe Asn Trp Gln Lys Ser Glu Pro Gln Pro Ser Asn

225

230

235

240

Asn Gln Leu Trp Ile Ile Ile Leu Ser Ser Val Val Ser Gly Ile Val

245

250

255

Val Ile Thr Ala Leu Thr Leu Arg Cys Leu Val His Arg Pro Ala Ala

260

265

270

Arg Trp Arg Gln Arg Glu Met Gly Arg Ala Arg Lys Trp Lys Arg Ser

275

280

285

His Leu Ser Thr

290

<210> 17

<211> 306

<212> PRT

<213> mus sp.

<400> 17

Met Ala Cys Asn Cys Gln Leu Met Gln Asp Thr Pro Leu Leu Lys Phe

1

5

10

15

Pro Cys Pro Arg Leu Ile Leu Leu Phe Val Leu Leu Ile Arg Leu Ser

20

25

30

Gln Val Ser Ser Asp Val Asp Glu Gln Leu Ser Lys Ser Val Lys Asp

35

40

45

Lys Val Leu Leu Pro Cys Arg Tyr Asn Ser Pro His Glu Asp Glu Ser

50

55

60

Glu Asp Arg Ile Tyr Trp Gln Lys His Asp Lys Val Val Leu Ser Val

65

70

75

80

Ile Ala Gly Lys Leu Lys Val Trp Pro Glu Tyr Lys Asn Arg Thr Leu

85

90

95

Tyr Asp Asn Thr Thr Tyr Ser Leu Ile Ile Leu Gly Leu Val Leu Ser

100

105

110

Asp Arg Gly Thr Tyr Ser Cys Val Val Gln Lys Lys Glu Arg Gly Thr

115

120

125

Tyr Glu Val Lys His Leu Ala Leu Val Lys Leu Ser Ile Lys Ala Asp

130

135

140

Phe Ser Thr Pro Asn Ile Thr Glu Ser Gly Asn Pro Ser Ala Asp Thr

145

150

155

160

Lys Arg Ile Thr Cys Phe Ala Ser Gly Gly Phe Pro Lys Pro Arg Phe

165

170

175

Ser Trp Leu Glu Asn Gly Arg Glu Leu Pro Gly Ile Asn Thr Thr Ile

180

185

190

Ser Gln Asp Pro Glu Ser Glu Leu Tyr Thr Ile Ser Ser Gln Leu Asp

195

200

205

Phe Asn Thr Thr Arg Asn His Thr Ile Lys Cys Leu Ile Lys Tyr Gly

210

215

220

Asp Ala His Val Ser Glu Asp Phe Thr Trp Glu Lys Pro Pro Glu Asp

225

230

235

240

Pro Pro Asp Ser Lys Asn Thr Leu Val Leu Phe Gly Ala Gly Phe Gly

245

250

255

Ala Val Ile Thr Val Val Val Ile Val Val Ile Ile Lys Cys Phe Cys

260

265

270

Lys His Arg Ser Cys Phe Arg Arg Asn Glu Ala Ser Arg Glu Thr Asn

275

280

285

Asn Ser Leu Thr Phe Gly Pro Glu Glu Ala Leu Ala Glu Gln Thr Val

290

295

300

Phe Leu

305

<210> 18

<211> 329

<212> PRT

<213> Felis catus

<400> 18

Met Gly Ile Cys Asp Ser Thr Met Gly Leu Ser His Thr Leu Leu Val

1 5 10 15

Met Ala Leu Leu Leu Ser Gly Val Ser Ser Met Lys Ser Gln Ala Tyr

20 25 30

Phe Asn Lys Thr Gly Glu Leu Pro Cys His Phe Thr Asn Ser Gln Asn

35 40 45

Ile Ser Leu Asp Glu Leu Val Val Phe Trp Gln Asp Gln Asp Lys Leu

50 55 60

Val Leu Tyr Glu Ile Phe Arg Gly Lys Glu Asn Pro Gln Asn Val His

65 70 75 80

Leu Lys Tyr Lys Gly Arg Thr Ser Phe Asp Lys Asp Asn Trp Thr Leu

85 90 95

Arg Leu His Asn Val Gln Ile Lys Asp Lys Gly Thr Tyr His Cys Phe

100 105 110

Ile His Tyr Lys Gly Pro Lys Gly Leu Val Pro Met His Gln Met Ser
 115 120 125

Ser Asp Leu Ser Val Leu Ala Asn Phe Ser Gln Pro Glu Ile Thr Val
 130 135 140

Thr Ser Asn Arg Thr Glu Asn Ser Gly Ile Ile Asn Leu Thr Cys Ser
 145 150 155 160

Ser Ile Gln Gly Tyr Pro Glu Pro Lys Glu Met Tyr Phe Gln Leu Asn
 165 170 175

Thr Glu Asn Ser Thr Thr Lys Tyr Asp Thr Val Met Lys Lys Ser Gln
 180 185 190

Asn Asn Val Thr Glu Leu Tyr Asn Val Ser Ile Ser Leu Pro Phe Ser
 195 200 205

Val Pro Glu Ala His Asn Val Ser Val Phe Cys Ala Leu Lys Leu Glu
 210 215 220

Thr Leu Glu Met Leu Leu Ser Leu Pro Phe Asn Ile Asp Ala Gln Pro
 225 230 235 240

Lys Asp Lys Asp Pro Glu Gln Gly His Phe Leu Trp Ile Ala Ala Val
 245 250 255

Leu Val Met Phe Val Val Phe Cys Gly Met Val Ser Phe Lys Thr Leu

260

265

270

Arg Lys Arg Lys Lys Lys Gln Pro Gly Pro Ser His Glu Cys Glu Thr

275

280

285

Ile Lys Arg Glu Arg Lys Glu Ser Lys Gln Thr Asn Glu Arg Val Pro

290

295

300

Tyr His Val Pro Glu Arg Ser Asp Glu Ala Gln Cys Val Asn Ile Leu

305

310

315

320

Lys Thr Ala Ser Gly Asp Lys Asn Gln

325

<210> 19

<211> 329

<212> PRT

<213> Canis familiaris

<400> 19

Met Tyr Leu Arg Cys Thr Met Glu Leu Asn Asn Ile Leu Phe Val Met

1

5

10

15

Thr Leu Leu Leu Tyr Gly Ala Ala Ser Met Lys Ser Gln Ala Tyr Phe

20

25

30

Asn Lys Thr Gly Glu Leu Pro Cys His Phe Thr Asn Ser Gln Asn Ile

35	40	45
Ser Leu Asp Glu Leu Val Val Phe Trp Gln Asp Gln Asp Lys Leu Val		
50	55	60
Leu Tyr Glu Leu Tyr Arg Gly Lys Glu Asn Pro Gln Asn Val His Arg		
65	70	75
Lys Tyr Lys Gly Arg Thr Ser Phe Asp Lys Asp Asn Trp Thr Leu Arg		
85	90	95
Leu His Asn Ile Gln Ile Lys Asp Lys Gly Leu Tyr Gln Cys Phe Val		
100	105	110
His His Lys Gly Pro Lys Gly Leu Val Pro Met His Gln Met Asn Ser		
115	120	125
Asp Leu Ser Val Leu Ala Asn Phe Ser Gln Pro Glu Ile Met Val Thr		
130	135	140
Ser Asn Arg Thr Glu Asn Ser Gly Ile Ile Asn Leu Thr Cys Ser Ser		
145	150	155
Ile Gln Gly Tyr Pro Glu Pro Lys Glu Met Tyr Phe Leu Val Lys Thr		
165	170	175
Glu Asn Ser Ser Thr Lys Tyr Asp Thr Val Met Lys Lys Ser Gln Asn		
180	185	190

Asn Val Thr Glu Leu Tyr Asn Val Ser Ile Ser Leu Ser Phe Ser Val

195

200

205

Pro Glu Ala Ser Asn Val Ser Ile Phe Cys Val Leu Gln Leu Glu Ser

210

215

220

Met Lys Leu Pro Ser Leu Pro Tyr Asn Ile Asp Ala His Thr Lys Pro

225

230

235

240

Thr Pro Asp Gly Asp His Ile Leu Trp Ile Ala Ala Leu Leu Val Met

245

250

255

Leu Val Ile Leu Cys Gly Met Val Phe Phe Leu Thr Leu Arg Lys Arg

260

265

270

Lys Lys Lys Gln Pro Gly Pro Ser His Glu Cys Glu Thr Asn Lys Val

275

280

285

Glu Arg Lys Glu Ser Glu Gln Thr Lys Glu Arg Val Arg Tyr His Glu

290

295

300

Thr Glu Arg Ser Asp Glu Ala Gln Cys Val Asn Ile Ser Lys Thr Ala

305

310

315

320

Ser Gly Asp Asn Ser Thr Thr Gln Phe

325

<210> 20

<211> 325

<212> PRT

<213> sus sp.

<400> 20

Met Gly Leu Ser Asn Ile Leu Phe Val Met Val Leu Leu Leu Ser Gly

1

5

10

15

Ala Ala Ser Leu Lys Ser Gln Ala Tyr Phe Asn Glu Thr Gly Glu Leu

20

25

30

Pro Cys His Phe Thr Asn Ser Gln Asn Leu Ser Leu Asp Glu Leu Val

35

40

45

Ile Phe Trp Gln Asp Gln Asp Asn Leu Val Leu Tyr Glu Leu Tyr Arg

50

55

60

Gly Gln Glu Lys Pro His Asn Val Asn Ser Lys Tyr Met Gly Arg Thr

65

70

75

80

Ser Phe Asp Gln Ala Thr Trp Thr Leu Arg Leu His Asn Val Gln Ile

85

90

95

Lys Asp Lys Gly Ser Tyr Gln Cys Phe Ile His His Lys Gly Pro His

100

105

110

Gly Leu Val Pro Ile His Gln Met Ser Ser Asp Leu Ser Leu Leu Ala

115

120

125

Asn Phe Ser Gln Pro Glu Ile Asn Leu Leu Thr Asn His Thr Glu Asn

130

135

140

Ser Val Ile Asn Leu Thr Cys Ser Ser Thr Gln Gly Tyr Pro Glu Pro

145

150

155

160

Gln Arg Met Tyr Met Leu Leu Asn Thr Lys Asn Ser Thr Thr Glu His

165

170

175

Asp Ala Asp Met Lys Lys Ser Gln Asn Asn Ile Thr Glu Leu Tyr Asn

180

185

190

Val Ser Ile Arg Val Ser Leu Pro Ile Pro Pro Glu Thr Asn Val Ser

195

200

205

Ile Val Cys Val Leu Gln Leu Glu Pro Ser Lys Thr Leu Leu Phe Ser

210

215

220

Leu Pro Cys Asn Ile Asp Ala Lys Pro Pro Val Gln Pro Pro Val Pro

225

230

235

240

Asp His Ile Leu Trp Ile Ala Ala Leu Leu Val Thr Val Val Val Val

245

250

255

Cys Gly Met Val Ser Phe Val Thr Leu Arg Lys Arg Lys Lys Lys Gln

260

265

270

Pro Gly Pro Ser Asn Glu Cys Gly Glu Thr Ile Lys Met Asn Arg Lys

275

280

285

Ala Ser Glu Gln Thr Lys Asn Arg Ala Glu Val His Glu Arg Ser Asp

290

295

300

Asp Ala Gln Cys Asp Val Asn Ile Leu Lys Thr Ala Ser Asp Asp Asn

305

310

315

320

Ser Thr Thr Asp Phe

325

<210> 21

<211> 323

<212> PRT

<213> Homo sapiens

<400> 21

Met Gly Leu Ser Asn Ile Leu Phe Val Met Ala Phe Leu Leu Ser Gly

1

5

10

15

Ala Ala Pro Leu Lys Ile Gln Ala Tyr Phe Asn Glu Thr Ala Asp Leu

20

25

30

Pro Cys Gln Phe Ala Asn Ser Gln Asn Gln Ser Leu Ser Glu Leu Val

35 40 45
 Val Phe Trp Gln Asp Gln Glu Asn Leu Val Leu Asn Glu Val Tyr Leu
 50 55 60
 Gly Lys Glu Lys Phe Asp Ser Val His Ser Lys Tyr Met Gly Arg Thr
 65 70 75 80
 Ser Phe Asp Ser Asp Ser Trp Thr Leu Arg Leu His Asn Leu Gln Ile
 85 90 95
 Lys Asp Lys Gly Leu Tyr Gln Cys Ile Ile His His Lys Lys Pro Thr
 100 105 110
 Gly Met Ile Arg Ile His Gln Met Asn Ser Glu Leu Ser Val Leu Ala
 115 120 125
 Asn Phe Ser Gln Pro Glu Ile Val Pro Ile Ser Asn Ile Thr Glu Asn
 130 135 140
 Val Tyr Ile Asn Leu Thr Cys Ser Ser Ile His Gly Tyr Pro Glu Pro
 145 150 155 160
 Lys Lys Met Ser Val Leu Leu Arg Thr Lys Asn Ser Thr Ile Glu Tyr
 165 170 175
 Asp Gly Ile Met Gln Lys Ser Gln Asp Asn Val Thr Glu Leu Tyr Asp
 180 185 190

Val Ser Ile Ser Leu Ser Val Ser Phe Pro Asp Val Thr Ser Asn Met

195

200

205

Thr Ile Phe Cys Ile Leu Glu Thr Asp Lys Thr Arg Leu Leu Ser Ser

210

215

220

Pro Phe Ser Ile Glu Leu Glu Asp Pro Gln Pro Pro Pro Asp His Ile

225

230

235

240

Pro Trp Ile Thr Ala Val Leu Pro Thr Val Ile Ile Cys Val Met Val

245

250

255

Phe Cys Leu Ile Leu Trp Lys Trp Lys Lys Lys Lys Arg Pro Arg Asn

260

265

270

Ser Tyr Lys Cys Gly Thr Asn Thr Met Glu Arg Glu Glu Ser Glu Gln

275

280

285

Thr Lys Lys Arg Glu Lys Ile His Ile Pro Glu Arg Ser Asp Glu Ala

290

295

300

Gln Arg Val Phe Lys Ser Ser Lys Thr Ser Ser Cys Asp Lys Ser Asp

305

310

315

320

Thr Cys Phe

<210> 22

<211> 309

<212> PRT

<213> Mus musculus

<400> 22

Met Asp Pro Arg Cys Thr Met Gly Leu Ala Ile Leu Ile Phe Val Thr

1 5 10 15

Val Leu Leu Ile Ser Asp Ala Val Ser Val Glu Thr Gln Ala Tyr Phe

20 25 30

Asn Gly Thr Ala Tyr Leu Pro Cys Pro Phe Thr Lys Ala Gln Asn Ile

35 40 45

Ser Leu Ser Glu Leu Val Val Phe Trp Gln Asp Gln Gln Lys Leu Val

50 55 60

Leu Tyr Glu His Tyr Leu Gly Thr Glu Lys Leu Asp Ser Val Asn Ala

65 70 75 80

Lys Tyr Leu Gly Arg Thr Ser Phe Asp Arg Asn Asn Trp Thr Leu Arg

85 90 95

Leu His Asn Val Gln Ile Lys Asp Met Gly Ser Tyr Asp Cys Phe Ile

100 105 110

Gln Lys Lys Pro Pro Thr Gly Ser Ile Ile Leu Gln Gln Thr Leu Thr
 115 120 125

Glu Leu Ser Val Ile Ala Asn Phe Ser Glu Pro Glu Ile Lys Leu Ala
 130 135 140

Gln Asn Val Thr Gly Asn Ser Gly Ile Asn Leu Thr Cys Thr Ser Lys
 145 150 155 160

Gln Gly His Pro Lys Pro Lys Lys Met Tyr Phe Leu Ile Thr Asn Ser
 165 170 175

Thr Asn Glu Tyr Gly Asp Asn Met Gln Ile Ser Gln Asp Asn Val Thr
 180 185 190

Glu Leu Phe Ser Ile Ser Asn Ser Leu Ser Leu Ser Phe Pro Asp Gly
 195 200 205

Val Trp His Met Thr Val Val Cys Val Leu Glu Thr Glu Ser Met Lys
 210 215 220

Ile Ser Ser Lys Pro Leu Asn Phe Thr Gln Glu Phe Pro Ser Pro Gln
 225 230 235 240

Thr Tyr Trp Lys Glu Ile Thr Ala Ser Val Thr Val Ala Leu Leu Leu
 245 250 255

Val Met Leu Leu Ile Ile Val Cys His Lys Lys Pro Asn Gln Pro Ser

260

265

270

Arg Pro Ser Asn Thr Ala Ser Lys Leu Glu Arg Asp Ser Asn Ala Asp

275

280

285

Arg Glu Thr Ile Asn Leu Lys Glu Leu Glu Pro Gln Ile Ala Ser Ala

290

295

300

Lys Pro Asn Ala Glu

305

<210> 23

<211> 303

<212> PRT

<213> Mus musculus

<400> 23

Met Gly Leu Ala Ile Leu Ile Phe Val Thr Val Leu Leu Ile Ser Asp

1

5

10

15

Ala Val Ser Val Glu Thr Gln Ala Tyr Phe Asn Gly Thr Ala Tyr Leu

20

25

30

Pro Cys Pro Phe Thr Lys Ala Gln Asn Ile Ser Leu Ser Glu Leu Val

35

40

45

Val Phe Trp Gln Asp Gln Gln Lys Leu Val Leu Tyr Glu His Tyr Leu

50	55	60
Gly Thr Glu Lys Leu Asp Ser Val Asn Ala Lys Tyr Leu Gly Arg Thr		
65	70	75
80		
Ser Phe Asp Arg Asn Asn Trp Thr Leu Arg Leu His Asn Val Gln Ile		
85	90	95
100		
Lys Asp Met Gly Ser Tyr Asp Cys Phe Ile Gln Lys Lys Pro Pro Thr		
105		
110		
Gly Ser Ile Ile Leu Gln Gln Thr Leu Thr Glu Leu Ser Val Ile Ala		
115	120	125
130		
Asn Phe Ser Glu Pro Glu Ile Lys Leu Ala Gln Asn Val Thr Gly Asn		
135		
140		
Ser Gly Ile Asn Leu Thr Cys Thr Ser Lys Gln Gly His Pro Lys Pro		
145	150	155
160		
Lys Lys Met Tyr Phe Leu Ile Thr Asn Ser Thr Asn Glu Tyr Gly Asp		
165	170	175
180		
Asn Met Gln Ile Ser Gln Asp Asn Val Thr Glu Leu Phe Ser Ile Ser		
185		
190		
Asn Ser Leu Ser Leu Ser Phe Pro Asp Gly Val Trp His Met Thr Val		
195	200	205

Val Cys Val Leu Glu Thr Glu Ser Met Lys Ile Ser Ser Lys Pro Leu

210

215

220

Asn Phe Thr Gln Glu Phe Pro Ser Pro Gln Thr Tyr Trp Lys Glu Ile

225

230

235

240

Thr Ala Ser Val Thr Val Ala Leu Leu Leu Val Met Leu Leu Ile Ile

245

250

255

Val Cys His Lys Lys Pro Asn Gln Pro Ser Arg Pro Ser Asn Thr Ala

260

265

270

Ser Lys Leu Glu Arg Asp Ser Asn Ala Asp Arg Glu Thr Ile Asn Leu

275

280

285

Lys Glu Leu Glu Pro Gln Ile Ala Ser Ala Lys Pro Asn Ala Glu

290

295

300

<210> 24

<211> 534

<212> PRT

<213> Unknown

<220>

<223> Description of Unknown Organism: Sequence

mz5020.protein from Figure 4.

<400> 24

Met Leu Arg Arg Arg Gly Ser Pro Gly Met Gly Val His Val Gly Ala

1 5 10 15

Ala Leu Gly Ala Leu Trp Phe Cys Leu Thr Gly Ala Leu Glu Val Gln

20 25 30

Val Pro Glu Asp Pro Val Val Ala Leu Val Gly Thr Asp Ala Thr Leu

35 40 45

Cys Cys Ser Phe Ser Pro Glu Pro Gly Phe Ser Leu Ala Gln Leu Asn

50 55 60

Leu Ile Trp Gln Leu Thr Asp Thr Lys Gln Leu Val His Ser Phe Ala

65 70 75 80

Glu Gly Gln Asp Gln Gly Ser Ala Tyr Ala Asn Arg Thr Ala Leu Phe

85 90 95

Pro Asp Leu Leu Ala Gln Gly Asn Ala Ser Leu Arg Leu Gln Arg Val

100 105 110

Arg Val Ala Asp Glu Gly Ser Phe Thr Cys Phe Val Ser Ile Arg Asp

115 120 125

Phe Gly Ser Ala Ala Val Ser Leu Gln Val Ala Ala Pro Tyr Ser Lys

130 135 140

Pro Ser Met Thr Leu Glu Pro Asn Lys Asp Leu Arg Pro Gly Asp Thr

145 150 155 160

Val Thr Ile Thr Cys Ser Ser Tyr Gln Gly Tyr Pro Glu Ala Glu Val

 165 170 175

Phe Trp Gln Asp Gly Gln Gly Val Pro Leu Thr Gly Asn Val Thr Thr

 180 185 190

Ser Gln Met Ala Asn Glu Gln Gly Leu Phe Asp Val His Ser Ile Leu

 195 200 205

Arg Val Val Leu Gly Ala Asn Gly Thr Tyr Ser Cys Leu Val Arg Asn

 210 215 220

Pro Val Leu Gln Gln Asp Ala His Ser Ser Val Thr Ile Thr Pro Gln

225 230 235 240

Arg Ser Pro Thr Gly Ala Val Glu Val Gln Val Pro Glu Asp Pro Val

 245 250 255

Val Ala Leu Val Gly Thr Asp Ala Thr Leu Arg Cys Ser Phe Ser Pro

 260 265 270

Glu Pro Gly Phe Ser Leu Ala Gln Leu Asn Leu Ile Trp Gln Leu Thr

 275 280 285

Asp Thr Lys Gln Leu Val His Ser Phe Thr Glu Gly Arg Asp Gln Gly

290

295

300

Ser Ala Tyr Ala Asn Arg Thr Ala Leu Phe Pro Asp Leu Leu Ala Gln

305

310

315

320

Gly Asn Ala Ser Leu Arg Leu Gln Arg Val Arg Val Ala Asp Glu Gly

325

330

335

Ser Phe Thr Cys Phe Val Ser Ile Arg Asp Phe Gly Ser Ala Ala Val

340

345

350

Ser Leu Gln Val Ala Ala Pro Tyr Ser Lys Pro Ser Met Thr Leu Glu

355

360

365

Pro Asn Lys Asp Leu Arg Pro Gly Asp Thr Val Thr Ile Thr Cys Ser

370

375

380

Ser Tyr Arg Gly Tyr Pro Glu Ala Glu Val Phe Trp Gln Asp Gly Gln

385

390

395

400

Gly Val Pro Leu Thr Gly Asn Val Thr Thr Ser Gln Met Ala Asn Glu

405

410

415

Gln Gly Leu Phe Asp Val His Ser Val Leu Arg Val Val Leu Gly Ala

420

425

430

Asn Gly Thr Tyr Ser Cys Leu Val Arg Asn Pro Val Leu Gln Gln Asp

435 440 445
 Ala His Gly Ser Val Thr Ile Thr Gly Gln Pro Met Thr Phe Pro Pro
 450 455 460
 Glu Ala Leu Trp Val Thr Val Gly Leu Ser Val Cys Leu Ile Ala Leu
 465 470 475 480
 Leu Val Ala Leu Ala Phe Val Cys Trp Arg Lys Ile Lys Gln Ser Cys
 485 490 495
 Glu Glu Glu Asn Ala Gly Ala Glu Asp Gln Asp Gly Glu Gly Glu Gly
 500 505 510
 Ser Lys Thr Ala Leu Gln Pro Leu Lys His Ser Asp Ser Lys Glu Asp
 515 520 525
 Asp Gly Gln Glu Ile Ala
 530

 <210> 25
 <211> 350
 <212> PRT
 <213> Homo sapiens

 <400> 25
 Met Ala Ser Phe Leu Ala Phe Leu Leu Leu Asn Phe Arg Val Cys Leu

1	5	10	15
Leu Leu Leu Gln Leu Leu Met Pro His Ser Ala Gln Phe Ser Val Leu			
20	25	30	
Gly Pro Ser Gly Pro Ile Leu Ala Met Val Gly Glu Asp Ala Asp Leu			
35	40	45	
Pro Cys His Leu Phe Pro Thr Met Ser Ala Glu Thr Met Glu Leu Lys			
50	55	60	
Trp Val Ser Ser Ser Leu Arg Gln Val Val Asn Val Tyr Ala Asp Gly			
65	70	75	80
Lys Glu Val Glu Asp Arg Gln Ser Ala Pro Tyr Arg Gly Arg Thr Ser			
85	90	95	
Ile Leu Arg Asp Gly Ile Thr Ala Gly Lys Ala Ala Phe Arg Ile His			
100	105	110	
Asn Val Thr Gly Ser Asp Arg Trp Lys Tyr Leu Cys Tyr Phe Gln Asp			
115	120	125	
Gly Asp Phe Tyr Glu Lys Ala Leu Val Glu Leu Lys Val Ala Ala Leu			
130	135	140	
Gly Ser Asp Leu His Val Asp Val Lys Gly Tyr Lys Asp Gly Gly Ile			
145	150	155	160

His Leu Glu Cys Arg Ser Thr Gly Trp Tyr Pro Gln Pro Gln Ile Gln

165

170

175

Trp Ser Asn Asn Lys Gly Glu Asn Ile Pro Thr Val Glu Ala Pro Val

180

185

190

Val Ala Asp Gly Val Gly Leu Tyr Ala Val Ala Ala Ser Val Ile Met

195

200

205

Arg Gly Ser Ser Gly Glu Gly Val Ser Cys Thr Ile Arg Asn Ser Leu

210

215

220

Leu Gly Leu Glu Lys Thr Ala Ser Ile Ser Ile Ala Arg Pro Phe Phe

225

230

235

240

Arg Ser Ala Gln Arg Trp Ile Ala Ala Leu Ala Gly Thr Leu Pro Val

245

250

255

Leu Leu Leu Leu Leu Gly Gly Ala Gly Tyr Phe Leu Trp Gln Gln Gln

260

265

270

Glu Glu Lys Lys Thr Gln Phe Arg Lys Lys Lys Arg Glu Gln Glu Leu

275

280

285

Arg Glu Met Ala Trp Ser Thr Met Lys Gln Glu Gln Ser Thr Arg Val

290

295

300

Lys Leu Leu Glu Glu Leu Arg Trp Arg Ser Ile Gln Tyr Ala Ser Arg

305

310

315

320

Gly Glu Arg His Ser Ala Tyr Asn Glu Trp Lys Lys Ala Leu Phe Lys

325

330

335

Pro Gly Glu Glu Met Leu Gln Met Arg Leu His Phe Val Lys

340

345

350

A'Conel

